

A REVISION OF THE AUSTRALIAN COSSIDAE (LEPIDOPTERA).

BY A. JEFFERIS TURNER, M.D., F.R.E.S.

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DEFINITION.

Tongue and maxillary palpi absent. Usually an areole is present in the forewing and a median cell in both wings, but there are some exceptions. The median vein is present in the lepidopterous cell, and usually divides there into its two primary branches, but one of these may be absent. The second cubital vein is present in both wings. The anal vein in the forewing is forked at its base. In the hindwing there are three anal veins. The larvae are wood-borers.

The Cossidae, as is shown by their neurulation, are the most primitive family of the Lepidoptera Heteroneura. In the Transactions of the Entomological Society of London for 1918 I gave a general review of the family based on the world-fauna, and to this I would refer the reader who is interested in its phylogeny. The family is present in all temperate and tropical regions, but is more numerous in species in Australia than in any other continent. For these two reasons their study is of special interest.

Owing to their cryptic coloration and habit of concealment little was known of our Australian species until recently. Only a few were named by early writers. It was not until the study of the habits and the breeding of the larvae were undertaken, that adequate material for description was available. For this we are indebted particularly to two collectors, the late Mr. F. P. Dodd and the late Mr. W. B. Barnard. An interesting account of the methods of the former is contained in Oberthur's *Études de Lepidopterologie Comparée* xi. (1915). All the Australian species and, with the exception of *Xyleutes*, *Zeuzera* and *Dudgeonea*, all the genera are endemic.

KEY TO GENERA.

1. Forewings without areole	Idioses	8
Forewings with areole	2	
2. Tibiae with spurs very short or absent	3	
Tibiae with spurs well developed	9	
3. Areole with strong posterior projection	4	
Areole not projecting	8	
4. Hindwings with subcostal not connected with cell	5	
Hindwings with subcostal connected with cell	7	
5. Forewings without median cell	Sympycnodes	1
Forewings with median cell	6	
6. Thorax and abdomen smooth	Catoxophylla	2
Thorax and abdomen hairy	Xyleutes	3
7. Hindwings with subcostal connected by a bar with upper angle of cell	Zeuzera	4
Hindwings with 11 arising from before end of cell and running into subcostal	Nepiomorpha	5

8. Forewings with areole and median cell short; abdomen not hairy	<i>Brachycyttara</i>	6
Areole and median cell long; abdomen hairy	<i>Ptilomacra</i>	7
9. Forewings without median cell	<i>Charmoses</i>	9
Forewings with median cell		10
10. Forewings with 11 from cell		11
Forewings with 11 from areole		14
11. Forewings with 8 absent	<i>Trigonocyttara</i>	10
Forewings with 8 present		12
12. Forewings with 7 and 8 connate or stalked		13
Forewings with 7 and 8 separate	<i>Cossodes</i>	11
13. Thorax smooth	<i>Dudgeonea</i>	12
Thorax with rough posterior crest	<i>Archaeoses</i>	13
14. Forewings with 8 and 9 stalked	<i>Culama</i>	14
Forewings with all veins separate	<i>Macrocyttara</i>	15

1. Gen. SYMPYCNODES Turn.

Trans. Roy. Soc. S.A. 1932, p.194.

Palpi very short, slender, closely appressed to face. Antennae of male bipectinate, apical third simple. Thorax with a rounded anterior crest. Forewings with no median cell, areole long with a strong posterior projection, 7 and 8 stalked, 9 connate, 11 from cell shortly before areole. Hindwings with small median cell, or none owing to posterior branch of median failing to chitinise, all veins separate. Type *S. trigonocosma* Turn.

1. SYMPYCNODES TRIGONOCOSMA Turn.

Trans. Roy. Soc. S.A. 1932, p.194.

NORTH QUEENSLAND: Cape York. QUEENSLAND: Brisbane; McPherson Rge.; Toowoomba; Bunya Mts.

This species appears to be close to *Xyleutes minima* Houlbert from New Guinea (Oberthur, Lep. Comp. xi. p. Pl. p. 80. f. 15).

2. SYMPYCNODES RHAPTODES Turn.

Proc. Roy. Soc. Q. 1941, p.80.

QUEENSLAND: McPherson Rge.; Stanthorpe. NEW SOUTH WALES: Nambucca Hds.; Mittagong.

2. Gen. CATOXOPHYLLA nov.

κατοξοφυλλος, with sharply pointed wings.

Palpi moderately long (1), smooth, appressed to face; terminal joint minute. Antennae of male bipectinate, extreme apex simple. Thorax and abdomen smooth-scaled. Tibiae without spurs. Forewings narrow, sharply pointed, areole strongly projecting, median cell long and narrow, 7 and 8 stalked, 9 connate, 11 from near base of areole. Hindwings moderately broad at base, rapidly narrowing to apex, a triangular median cell, all veins separate. Differs from *Xyleutes* in the narrow wings and smooth thorax and abdomen.